AMENDMENT

In The Claims:

The claims of the application have been amended as shown in the following marked copies of the claims which replace all prior versions thereof.

1-22. (Previously Canceled).

23. (Currently Amended): A method ~~of~~ utilizing an adaptive speaker identity verification system ~~measuring a level of similarity between a sample and physical characteristics of an individual,~~ comprising:

receiving first input data, which represents a person's unclassified speech utilizing the adaptive speaker identity verification system; ~~input data representing physical characteristics of an individual of a known classification;~~

receiving second input data, which represents in part probability distributions for authentic and spurious classes based upon the pooled output statistics of the adaptive speaker identity verification system, including the equal error rate, and which represents in part optional parameters to focus on at least one region of interest in a decision space;

~~processing the input data to generate an output representing class-specific probability distributions based on the received input data;~~

computing a transform ~~based on the output; and~~ of the first input data using the second input data with a normalized detector scale transformer associated with the adaptive speaker identity verification system onto a normalized, one dimension, decision scale based on the transform; and

~~transforming the probability distributions onto a normalized scale based on the transform;~~

~~determining an equal error rate associated with the class-specific probability distributions; and~~

establishing at least one decision <u>criterion,</u> ~~criterion based upon the equal error rate~~ wherein the at least one decision criterion corresponds to a level of similarity <u>or a level of dissimilarity</u> ~~between a sample and the physical characteristics of the individual.~~ <u>between the first input data representing a person's unclassified speech data and the second input data with the adaptive speaker identity verification system.</u>

24. (Previously Canceled).

25. (Currently Amended): The method ~~according to claim~~ <u>of claim</u> 23, wherein ~~the step of transforming comprises:~~ <u>the at least one region of interest in a decision space includes at least two regions of interest in a decision space that are mapped onto the normalized, one dimension, decision scale.</u> ~~defining at least two regions of the output; and~~
~~mapping the at least two regions onto the normalized scale.~~

26. (Currently Amended): The ~~according to claim~~ <u>of claim</u> 25, wherein the values of the ~~normalized~~ <u>normalized, one dimension, decision</u> scale range from 0 to 100.

27. (Currently Amended): The method ~~according to claim~~ <u>of claim</u> 25, wherein the <u>at least two regions of interest in a decision space that are mapped onto the normalized, one dimension, decision scale</u> ~~mapping~~ is performed through linear interpolation.

28. (Currently Amended): The method ~~according to claim~~ of claim 25, wherein the at least two regions of interest in a decision space comprise varying degrees of similarity or varying degrees of dissimilarity.

29. (Currently Amended): The method of claim 23, wherein the second input data further comprises at least one optional transform parameter.

30. (Currently Amended): The method of claim 23, wherein the normalized, one dimension, decision ~~normalized~~ scale is linear in cumulative probability.

31. (Currently Amended): The method of claim 23, wherein the normalized, one dimension, decision ~~normalized~~ scale is derived from a ratio ~~based on the probability distributions.~~ of probabilities of an error.

32. (Previously Canceled).

33. (Canceled).

34. (Previously Canceled).

35. (Currently Amended): ~~A pattern recognition~~ An adaptive speaker identity verification system comprising:

an adaptive speaker identity verification system, which receives first input data, which represents a person's unclassified speech, and receives second input data, which represents in part probability distributions for authentic and spurious classes based upon the pooled output statistics of the adaptive speaker identity verification system, including the equal error rate, and which represents in part optional parameters to focus on at least one region of interest in a decision space that then computes a transform of the first input data using the second input data with a normalized detector scale transformer associated with the adaptive speaker identity verification system onto a normalized, one dimension, decision scale based on the transform and then establishes at least one decision criterion, wherein the at least one decision criterion corresponds to a level of similarity or a level of dissimilarity between the first input data representing a person's unclassified speech data and the second input data with the adaptive speaker identity verification system.

~~a computer readable medium having computer readable program code embodied thereon, the computer readable program code, when executed, implementing on the computer a method of receiving input data representing physical characteristics of an individual of a known classification, generating an output representing class-specific probability distributions based on the received input data, computing a transform based on the output, and transforming the probability distributions onto a normalized scale based on the transform, determining an equal error rate associated with the class-specific probability distributions; and establishing at least one decision criterion based upon the equal error rate wherein the at least one decision criterion corresponds to a level of similarity between a sample and the physical characteristics of the individual.~~

36. (Canceled).

37. (Currently Amended): The system of claim 35, wherein the ~~transformer constructor comprises means for~~ computing of the transform includes combining the class-specific probability distributions.

38. (Currently Amended): The system of claim 35, wherein the at least one region of interest in a decision space includes at least two regions of interest in a decision space that are mapped onto the normalized, one dimension, decision scale. ~~transformer comprises: means for defining at least two regions of the combined class-specific probability distributions; and means for mapping the at least two regions onto the normalized scale.~~

39. (Currently Amended): The system of claim 35, wherein the values of the ~~normalized~~ normalized, one dimension, decision scale range from 0 to 100.

40. (Canceled).

41. (Currently Amended): The system of claim 35, wherein the at least two regions of interest in a decision space represent varying degrees of similarity or varying degrees of dissimilarity.

42. (Currently Amended): The system of claim 35, wherein the normalized, one dimension, decision ~~normalized~~ scale is linear in cumulative probability.

43. (Currently Amended): The system of claim 35, wherein the normalized, one dimension, decision normalized scale is derived from a ratio based on the probability distributions. of probabilities of an error.

44. (Currently Amended): The system of claim 35, wherein the at least one decision criterion defines a single threshold number corresponding to the level of similarity or the level of dissimilarity.

45. (Previously Canceled).

46. (Canceled).

47-51. (Previously Canceled).

52. (Currently Amended): The method according to claim of claim 26, wherein the normalized, one dimension, decision normalized scale range is calibrated to set the equal error rate at a value of 50 on the normalized, one dimension, decision normalized scale.

53. (Currently Amended): The method of claim 33, claim 23, wherein the physical characteristics of the person's unclassified speech are comprised of includes both physiological and behavioral characteristics. characteristics of speech.

54. (Currently Amended): The system of claim 39, wherein the ~~normalized, one dimension, decision~~ normalized scale range is calibrated to set the equal error rate at a value of 50 on the normalized, one dimension, decision ~~normalized~~ scale.

55. (Currently Amended): The system of ~~claim 46,~~ claim 35, wherein the ~~physical characteristics of~~ the person's unclassified speech ~~are comprised of~~ includes both physiological and behavioral characteristics. ~~characteristics of speech.~~

56. (New): The system of claim 38, wherein the at least two regions of interest in a decision space that are mapped onto the normalized, one dimension, decision scale is performed through linear interpolation.

57. (New): The system of claim 35, wherein the at least two regions of interest in a decision space comprise varying degrees of similarity or varying degrees of dissimilarity.

58. (New): The system of claim 35, wherein the second input data further comprises at least one optional transform parameter.

59. (New): The method of claim 23, wherein the at least one decision criterion defines a single threshold number corresponding to the level of similarity or the level of dissimilarity.